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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/543,054 | 04/05/2000 | Gopal Parupudi | MS1-507US | 7234 |
| 22801 | 7590 | 03/22/2005 | EXAMINER | |
| LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201 | | | BARQADLE, YASIN M | |
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2153

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/543,054

Applicant(s)

PARUPUDI ET AL.

Examiner

Yasin M Barqadle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/7/2004, 1122005</u> . | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 07, 2005 has been entered.

Response to Argument

1. Applicant's arguments filed on October 07, 2004 have been fully considered but they are not deemed to be persuasive.

Response to Arguments

In response to applicant's argument that the office has failed to establish a prima facie case of obviousness because the references are not properly combinable, the examiner respectfully disagrees, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

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references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the hierarchical tree structure of nodes taught by Wang. Examiner notes that Wang's reference is relayed upon to address Merriman's deficiency of traversing a hierarchical tree structure of nodes of which at least one node comprises a part. Wang teaches a communication system that is organized into a hierarchical tree structure of nodes having several layers. The highest layer may be the earth followed by country, state, area code, city and areas or locations defined as the lowest layer figs. 1 and 22; col. 3, lines 38-61 and col. 18, lines 51 to col. 19, line 26. See abstract. Therefore it is obvious to one of ordinary skill in the art at the time of the invention to combine Wang's organized hierarchical tree structure of nodes with Merriman's system of determining the current location of a device, because Wang's system provides an efficient way of linking root nodes of various trees in a layered hierarchical tree structure that includes countries, states, cities and specific areas and locations. In doing so, a portable device's current location in a hierarchical tree structure of nodes is precisely determined (abstract; col. 6, lines 13-17 and col. 18, lines 20-46).

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Furthermore, Merriam discloses determining the current location (a point in space) of a position device that is transported to a dig site (some place in the earth where cables are buried).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7,10,13-18,20,23-28,32-36, 45-55, and 58-61,and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merriam US (6401051) in view of Wang US (5539922).

As per claims 1, 13, 23 and 32 Merriam teaches a computing device comprising:

one or more processors [Fig.2a, device 102, 212 and Col. 3, lines 43-48];

memory operably associated with the one or more processors [Fig.2a, device 102, 214 and 224 and Col. 3, lines 43-54]; and

a context service module loadable in the memory and executable by the one or more processors to receive context information

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from one or more context providers (Fig.2a, device 106) and process the information to determine a current device context [col. 3, lines 43 to col. 4, lines 5], at least one node associated with context information (location of the dig site col. 3, lines 5-10).

Although Merriam shows substantial features of the claimed invention, he does not explicitly show traversing a hierarchical tree structure of which the at least one node comprises a part. Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Merriam, as evidenced by Wang USPN. (5539922).

In analogous art, Wang disclose a communication system with hierarchical system of nodes organized into multiple node trees (fig. 22 and fig. 12), the hierarchical system is capable of tracking the location of the transceiver as it moves between nodes and the hierarchical tree structure (traversing) [abstract. See also col. 12, lines 18-41]. Giving the teaching of Wang, it is obvious to one ordinary skill in the art at the of the invention to combine Wang's organized hierarchical tree structure of nodes with Merriman's system of determining the current location of a device, because Wang's system provides an efficient way of linking root nodes of various trees in a layered hierarchical tree structure that includes countries, states, cities and specific areas and locations. In doing so, a portable device's current location in a hierarchical tree structure of

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nodes is precisely determined (abstract; col. 6, lines 13-17 and col. 18, lines 20-46).

As per claims 2, 14, 24 and 33 Merriam teaches computing device embodied as a mobile computing device [col. 1, line 5 and Col. 3, lines 5-8].

As per claims 3, 15, 25 and 34, Merriam teaches computing device embodied as a desktop computing device [col. 1, line 5 and Col. 3, lines 5-8].

As per claim 4, Merriam teaches computing device wherein the device comprises cache memory that maintains a current device context [Col. 3, lines 45-56].

As per claims 5 and 16, Merriam teaches computing device wherein the context service module is configured to automatically receive the context information from the context providers [col. 3, lines 5-10 and col. 3, lines 61 to col. 4, lines 5].

As per claims 6 and 17, Wang as modified teaches the computing device of claim 1, wherein the context service module is configured to automatically receive the context information from the context providers and, as the context of the computing device changes, process the information to determine a new current device context [Col. 5, lines 49 to col. 6, line 31].

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As per claims 7 and 18, Merriam teaches the computing device wherein the context service module is configured to request context information from one or more of the context providers [col. 3, lines 43 to col. 4, lines 5].

As per claims 10 and 20, Merriam teaches the computing device of claim 1 further comprising a context provider interface associated with the context service module, the context provider interface comprising a common interface that is capable in receiving context information from multiple different context providers [Col. 5, lines 49 to col. 6, line 31].

As per claim 26, Merriam teaches a computing device wherein the location service module is configured to determine the current device location [col. 3, lines 43 to col. 4, lines 5],

As per claim 26, Wang teaches traversing multiple nodes of the hierarchical tree [fig. 12, and col. 5, lines 1-25; col. 12, lines 18-41].

As per claims 27 and 28, Wang teaches the computing device further comprising another hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a physical or logical entity, the location service module being configured to determine the current device location by traversing multiple nodes of the hierarchical trees [col. 5, lines 1-25; col. 10, 51-56];

a link between nodes on the different trees, the location service module being configured to determine the current device location by traversing multiple nodes of the hierarchical trees [see fig. 12 and fig.22; col. 5, lines 1-25; col. 10, 51-56; and col. 12, lines 18-41].

As per claims 35 and 36, the claims include similar limitations as claims 1,13, and 23 above. See the rejection on claims 1,13 and 23 above.

As per claim 45, Merriam teaches a computer-implemented method of determining a computing device context comprising:

receiving, with a computing device, information that pertains to a current context of the device [col. 3, lines 43 to col. 4, line 31].

processing the information on and with the device to ascertain the current context of the computing device [col. 3, line 43 to col. 4, line 5].

As per the limitation determining, from the context information, at least one node associated with the context information and traversing at least a portion of a hierarchical tree structure of which said at least node comprises a part [see the combination and the rejection made on claims 1,13 and 23 above].

As per claim 46, Merriam teaches the computer-implemented method of claim 45, wherein said receiving comprises receiving the

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information with a mobile computing device [col. 1, line 5 and Col. 3, lines 5-8].

As per claim 47, Wang teaches the computer-implemented method of claim 45, wherein said receiving comprises receiving the information with a hand-held computing device [Col. 3, lines 55-62].

As per claim 48, Merriam teaches the computer-implemented method of claim 45, wherein said receiving comprises receiving the information with a desktop computing device [col. 1, line 5 and Col. 3, lines 5-8].

As per claim 49, Merriam teaches the computer-implemented method of claim 45, wherein the current context is the device location [col. 3, lines 43-67].

As per claim 50, Merriam teaches the computer-implemented method of claim 49, wherein the receiving of the information comprise receiving information from multiple different location providers [col. 3, lines 43 to col. 4, lines 31].

As per claim 51, Merriam teaches computer-implemented method of claim 50, wherein the information that is received from the multiple different location providers is received in different forms [col. 3, lines 43 to col. 4, lines 31].

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As per claim 52, Merriam teaches the computer-implemented method of claim 50, wherein the receiving of the information comprises receiving the information through a common interface [col. 4, lines 10-31].

As per claim 53, Merriam teaches the computer-implemented method of claim 45, wherein the receiving of the information comprise receiving information from multiple different context providers [col. 3, lines 43 to col. 4, lines 31].

As per claim 54, Merriam teaches the computer-implemented method of claim 53, wherein the information that is received from the multiple different location providers is received in different forms [col. 4, lines 10-31].

As per claim 55, Merriam teaches computer-implemented method of claim 53, wherein the receiving of the information comprises receiving the information through a common interface [col. 3, lines 43 to col. 4, lines 31].

As per claims 58-60, the claims include similar limitations as addressed above on claims 1 and 13 and claims 45-57. Therefore, they are rejected for the same reason.

As per claim 61, Wang teaches the computer-implemented method of claim 60, wherein one tree structure comprises a unique

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representation of a physical or logical entity [Col. 1, lines 50-67].

As per claim 66, Wang teaches the computer-implemented method of claim 59 further comprising before processing the information to ascertain a node, resolving any conflicts that might exist between information that is received from different location providers [col. 12, lines 18-41].

3. Claims 8-9, 11-12, 19,21-22,29-31, 37-44, 56-57,62-65 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merriam US (6401051) in view of Wang US (5539922) and further in view of Reed et al US (6088717).

As per claim 37, Merriam and Wang teach all the limitations of the invention as explained in claims 1, 13, 58 and 59 above. However, Merriam and Wang are silent about using one or more application program interfaces (API).

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Merriam and Wang, as evidenced by Reed et al USPN. (6088717).

In an analogous art, Reed et al, teach using application program interfaces (API) to transfer and access data, metadata, and methods of communications operations between provider computer and consumer computer through a communication network. Transfer of metadata and methods permits intelligent processing

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of information [abstract and Col.141, lines 60-67 and Col.142, lines 1-29].

Giving the teaching of Reed et al, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Merriam and Wang by providing Reed et al's API communication system for the advantage of accessing data, metadata, and methods of communications objects stored in databases and for a further of advantage of facilitating request services from another application within a desktop, server or network operating environment [Col.141, lines 60-67 and Col.142, lines 1-18].

As per claims 8, 19, and 29, Merriam teaches the computing device of claim 1, wherein the context service module is configured to provide information concerning a current device context [col. 3, lines 43 to col. 4, lines 31].

As for the use by one or more applications, see claim 37 below.

As per claims 9, Merriam teaches the computing device wherein the context service module is configured to receive a request for current device context information [col. 3, lines 43 to col. 4, lines 31].

As for the use by one or more applications, see claim 37 above.

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As per claims 11, 21 and 30, Reed et al teach the invention further comprising one or more application program interfaces (APIs) operably associated with the context service module, the one or more APIs being callable by one or more applications to acquire information concerning the current device context [See the rejection below on Claim 37. Col.95 lines 66-67 and Col.96, lines 1-60].

As per claims 12, 22 and 31, Wang teaches a computing device further comprising one or more events that are configured to receive information concerning a current device context responsive to the occurrence of one or more events [Col. 5, lines 49 to col. 6, line 31].

As for the use by one or more applications, see claim 37 above.

As per claim 38, Merriam teaches the location-aware computing system of claim 37, wherein at least one of the one or more computing devices comprises a mobile computing device [col. 1, line 5 and Col. 3, lines 5-8].

As per claim 39, Merriam teaches the location-aware computing system of claim 37, wherein at least one of the one or more computing devices comprises a desktop computing device [col. 1, line 5 and Col. 3, lines 5-8].

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As per claim 40, Merriam teaches the location-aware computing system of claim 37, wherein the location provider interface is configured to receive location information from multiple different location providers [col. 3, lines 43 to col. 4, lines 5].

As per claim 41, Merriam teaches the location-aware computing system of claim 37, wherein the location provider interface is configured to receive location information from multiple different location providers, the location service module being configured to poll one or more of the location providers so that the polled location provider can provide location information to the location provider interface [col. 3, lines 43 to col. 4, lines 5].

As per claim 42, Merriam teaches the location-aware computing system of claim 37 further comprising:

Wang teaches a hierarchical tree structure resident on the media and comprising multiple nodes each of which represent geographical divisional of the Earth, the location service module being configured to process the information to ascertain a current device location that comprises one node on the hierarchical tree structure [abstract. See also col. 12, lines 18-41].

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As per claims 43 and 44, include similar limitations as discussed in claim 37 and 42 above. Therefore, they are rejected for the same rationale.

As per claim 56, 57 and 62, Reed et al as modified teach the computer-implemented method of claim 59 further comprising receiving a request from one or more applications for information that pertains to a current device location and providing the one or more applications with the information that pertains to the current device location [Col.141, lines 36-67 and Col.142, lines 1-18].

As per claims 63, Reed et al teach the computer-implemented method of claim 62, wherein the receiving of the request comprises receiving a call to an application program interface (API) [Col.141, lines 36-67 and Col.142, lines 1-18].

As per claim 64, Wang teaches the computer-implemented method of claim 62, wherein the receiving of the request comprises receiving an event registration [col. 12, lines 18-41].

As per claim 65, Reed et al as modified teaches the computer-implemented method of claim 62 further comprising applying a security policy to the information that pertains to the current device location before providing the information to the one or more applications [Col. 113, lines 7-64].

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As per claim 67, see the rejection made on claims 1 and 37 above. Therefore, the claim is rejected with the same rationale.

Conclusion

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Yasin Barqadle

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First Action

*Next week
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In the Claims

Claims 1-67 remain in the application and are listed as follows:

1. (Previously Presented) A computing device comprising:
one or more processors;
memory operably associated with the one or more processors; and
a context service module loadable in the memory and executable by the one
or more processors to receive context information from one or more context
providers and process the information to determine a current device context by
determining, from the context information, at least one node associated with the
context information and traversing at least a portion of a hierarchical tree structure
of which said at least one node comprises a part.

2. (Original) The computing device of claim 1 embodied as a mobile
computing device.

3. (Original) The computing device of claim 1 embodied as a desktop
computing device.

4. (Original) The computing device of claim 1, wherein the device
comprises cache memory that maintains a current device context.

5. (Original) The computing device of claim 1, wherein the context
service module is configured to automatically receive the context information
from the context providers.